

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
**(PCT Article 36 and Rule 70)**

Applicant's or agent's file reference PD53542PC	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 03/13000	International filing date (day/month/year) 20.11.2003	Priority date (day/month/year) 21.11.2002
International Patent Classification (IPC) or both national classification and IPC G06F1/16		
Applicant SONY ERICSSON MOBILE COMMUNICATIONS AB et al.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 3 sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the opinion</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>
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Name and mailing address of the international preliminary examining authority:  European Patent Office - Gitschner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840	Authorized Officer González Gutiérrez, Telephone No. +49 30 25901-497



INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

International application No. PCT/EP 03/13000

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-11 as originally filed

**Claims, Numbers**

1-19 received on 24.11.2004 with letter of 22.11.2004

**Drawings, Sheets**

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

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5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N) Yes: Claims 1-19  
No: Claims

Inventive step (IS) Yes: Claims 1-19  
No: Claims

Industrial applicability (IA) Yes: Claims 1-19  
No: Claims

2. Citations and explanations

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. The application relates to a portable electronic device comprising two parts, with flexible conductors connected to the first part and to the second part (claim 1), and a portable electronic device comprising two parts, the first part comprising an image capturing unit having a lens and the second part comprises a display (claim 17).
  
2. Such a device is disclosed by D1 (EP-A-1 178 647 (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.) 6 February 2002 (2002-02-06)).
  
3. The essential difference between the subject-matter of independent claims 1 and 17 and D1 is that in independent claim 1, one of the parts can rotate approximately 360 degrees in relation to the other part, and in independent claim 17, one part can rotate at least 270 degrees in relation to the other part.
  
4. The problem solved by this new feature can be regarded as how to provide easier holding of the portable device in the hand of a user depending on the wanted use of the device, for instance, to use the phone as a camera where the display acts as a viewfinder.
  
5. The combination of these new features are neither disclosed nor rendered obvious by any of the documents cited in the search report.  
The requirements of Article 33 PCT with respect to novelty and inventive step are met.

## CLAIMS

1. Portable electronic device (10) comprising:
  - 5 a first part (12) including electrical circuits and having an exterior side (30), an interior side (24), and top and bottom (20) sides,
  - 10 a second part (14) also including electrical circuits and also having an exterior side (16), an interior side (22) and top and bottom (18) sides,  
at least one hinge (36) connecting the bottom sides of the first and second parts to each other and allowing rotation of one part with approximately 360 degrees in relation to the other part, and
  - 15 at least one first set (32, 34) of flexible electrical conductors connected to the first part (12) at the exterior side (30) adjacent the bottom side (20) thereof and to the second part (14) at the interior side (22) adjacent the bottom side (18) thereof.
2. Portable electronic device according to claim 1, wherein the first set of electrical conductors (32) stretches round the bottom side (20) of the first part (12) when the device is folded.
- 20 3. Portable electronic device according to claim 2, wherein the first set of flexible electrical conductors (32) stretches round the bottom side (18) of the second part (14) when a part is rotated with approximately 360 degrees in relation to the other part.
- 25 4. Portable electronic device according to any previous claim, wherein the set of conductors are essentially provided at right angles to both the bottom sides.
5. Portable electronic device according to any previous claim, wherein the first set of flexible electrical conductors is separate from the hinge structure of the device.
- 30 35 6. Portable electronic device according to any previous claim, further including a second set of flexible electrical conductors connected to the second part (14) at the exterior side (16) adjacent the bottom side (18) thereof and to the first part (12) at the interior side (24) adjacent the bottom side (20) thereof.
7. Portable electronic device according to claim 6, wherein the second set of flexible electrical conductors stretch round the bottom side of the second part when the device is folded.

8. Portable electronic device according to any previous claim, wherein both the bottom sides have a rounded shape.
- 5 9. Portable electronic device according to any previous claim, wherein both the bottom sides are provided with at least one groove for receiving a set of flexible electrical conductors.
- 10 10. Portable electronic device according to any previous claim, wherein one of the parts is provided with gears (38) at its bottom side and the other part is provided with gaps (40), with which the gears mesh.
- 15 11. Portable electronic device according to any previous claim, wherein the at least one hinge (36) is in the form of a plate comprising two sections each defining an axis of rotation displaced from the other in the plane of the plate and each section has a protrusion (46) on both sides in the middle of an area defining the axis.
- 20 12. Portable electronic device according to claim 11, wherein each part is provided with a slit (43) for receiving a section and each slit is provided with cavities (44) on both sides within the interior of a part for receiving the protrusions (46) of said section for securing the hinge (36) in said part.
- 25 13. Portable electronic device according to any previous claim, wherein a set of flexible electrical conductors is provided in the form of a flex film.
- 30 14. Portable electronic device according to any of claims 1 - 11, wherein a set of flexible electrical conductors is provided as a cable comprising a number of wires.
- 35 15. Portable electronic device according to any previous claim, wherein the first part (12) includes an image captioning unit having a lens (48) on the interior side (24) and the second part (14) includes a display (28) provided on the interior side (22).
16. Portable electronic device according to any previous claim, wherein the device is a cellular phone.

17. Portable electronic device (10) comprising:

a first part (12) including electrical circuits and having an exterior side (30), an interior side (24), and top and bottom (20) sides,  
5 a second part (14) also including electrical circuits and also having an exterior side (16), an interior side (22) and top and bottom (18) sides, and  
at least one hinge (36) connecting the bottom sides of the first and second parts to each other and allowing rotation of one part in relation to the other with at least approximately 270 degrees,  
10 wherein the first part (12) comprises an image captioning unit having a lens (48) on the interior side and the second part (14) comprises a display (28) provided on the interior side.

18. Portable communication device according to claim 17, wherein the hinge allows rotation of one part in relation to the other with approximately 360 degrees.

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19. Portable communication device according to claim 17 or 18, wherein at least one first set (32, 34) of flexible electrical conductors are connected between the first part and the second part for providing electrical connection between electrical circuits of the first and second parts.

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